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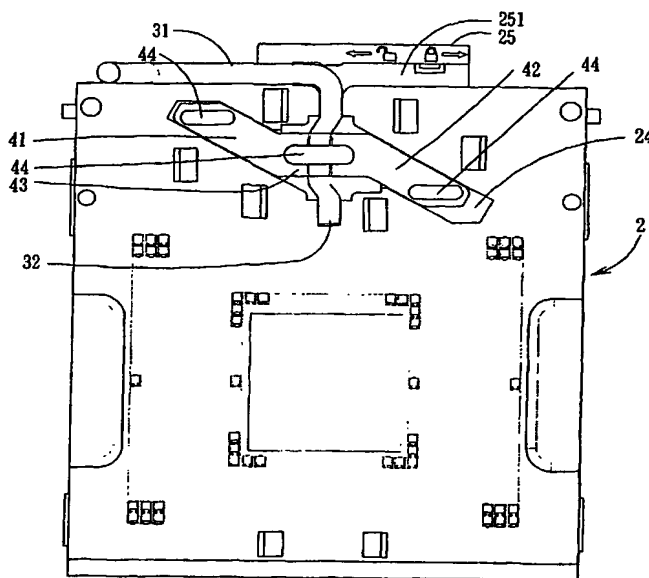
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[Continued on next page]

(54) Title: **ZIF ELECTRICAL CONNECTOR**



(57) Abstract: A ZIF electrical connector comprises a base and a sliding cover. The base defines a plurality of terminal-receiving cavities receiving a plurality of conductive terminals. The cover moves along a first direction and defines a plurality of through holes corresponding to the terminal-receiving cavities. The base defines a recess portion partly slant with the first direction. A slider moves in the recess portion and has a body and part of the body intervening with the cover. A drive means contacts with the body of the slider. When the drive means operates out of the insulative housing, the drive means drives the body to move along a second direction slant the first direction and further drive the cover to displace along the first direction between a first position and a second position.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/005489 A (HIRATA HIDEYUKI ; HIRAYAMA TAKA AKI (JP); MOLEX INC (US)) 16 January 2003 (2003-01-16) page 5, line 7 - page 6, line 25; figures 1-3	1-15
A	US 5 013 256 A (MATSUOKA NORIYUKI ET AL) 7 May 1991 (1991-05-07) column 5, line 58 - column 6, line 30; figures 5a-5c	1-15
A	US 5 017 152 A (MATSUOKA NORIYUKI) 21 May 1991 (1991-05-21) column 3, line 57 - column 4, line 43; figure 1	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 03005489	A	16-01-2003	JP	2003036947 A	07-02-2003
			TW	555217 Y	21-09-2003
			WO	03005489 A2	16-01-2003
US 5013256	A	07-05-1991	JP	2123086 U	09-10-1990
US 5017152	A	21-05-1991	JP	2174084 A	05-07-1990